

CLAIMS

We claim:

- 1 1. A method of detecting defects in a recordable optical storage medium,
2 comprising the steps of:
3 accessing a segment of multimedia data that has been recorded onto a
4 portion of the recordable storage medium;
5 selectively examining the segment to determine whether the portion contains
6 a defect; and
7 taking corrective measures if a defect is detected, wherein the corrective
8 measures are one or more of the corrective measures selected from the group
9 comprising:
10 generating a defect message;
11 storing the address of the portion of the recordable storage medium in
12 a table;
13 writing the segment of multimedia data onto a new portion of the
14 recordable storage medium; or
15 modifying said selectively examining step.

- 1 2. The method according to claim 1, wherein said accessing step comprises the
2 step of recording the segment of multimedia data onto the portion of the recordable
3 storage medium.

1 3. The method according to claim 1, wherein said selectively examining step
2 comprises the steps of:
3 selectively reading the segment; and
4 selectively processing at least one error correction indicator in the segment to
5 locate at least one error in the segment.

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1 4. The method according to claim 3, wherein the errors are correctable
2 and the number of errors has reached a predetermined threshold.

1 5. The method according to claim 3, wherein the errors are uncorrectable.

1 6. The method according to claim 5, wherein said selectively reading and
2 said selectively processing steps are repeated until the errors are corrected or
3 repeated for a predetermined number of times, whichever is less.

1 7. The method according to claim 6, wherein the recordable optical
2 storage medium is a disc that spins during said selectively reading step and the
3 selectively reading step further comprises the step of decreasing the speed of the
4 disc prior to each said selectively reading step.

1 8. The method according to claim 7, wherein said selectively reading step
2 further comprises the step of maintaining the speed of the disc substantially constant
3 during each said selectively reading step.

9. The method according to claim 5, wherein said selectively reading step further comprises the step of skipping over at least a portion of the segment.

10. The method according to claim 1, further comprising the step of providing a front end section of a storage medium device, wherein said selectively examining step is performed exclusively within said front end section.

11. A method of detecting defects in a recordable storage medium, comprising the steps of:

writing a segment of test data onto at least a portion of the recordable storage medium;

selectively examining the segment of test data to determine whether the recordable storage medium contains a defect; and

taking corrective measures if a defect is detected, wherein the corrective measures are one or more of the corrective measures selected from the group comprising:

generating a defect message;

storing the address of the portion of the recordable storage medium in a table; or

writing the segment of test data onto a new portion of the recordable storage medium.

12. A system for detecting defects in a recordable optical storage medium,

comprising:

a pickup assembly for accessing a segment of multimedia data that has been recorded onto a portion of the recordable storage medium; and

a controller for:

selectively examining the segment to determine whether the portion contains a defect; and

taking corrective measures if a defect is detected, wherein the corrective measures are one or more of the corrective measures selected from the group comprising:

generating a defect message;

storing the address of the portion of the recordable storage medium in a table;

writing the segment of multimedia data onto a new portion of the recordable storage medium; or

modifying said selectively examining step.

13. The system according to claim 12, wherein the pickup assembly

records the segment of multimedia data onto the portion of the recordable storage medium.

14. The system according to claim 12, wherein said controller comprises:

a front end processor; and

3 a back end processor.

1 15. The system according to claim 14, wherein the front end processor is
2 programmed to:

3 selectively reading the segment; and

4 selectively processing at least one error correction indicator in the segment to
5 locate at least one error in the segment.

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1 16. The system according to claim 15, wherein the errors are correctable
2 and the number of errors has reached a predetermined threshold.

1 17. The system according to claim 15, wherein the errors are
2 uncorrectable.

1 18. The system according to claim 17, wherein the front end processor is
2 further programmed to repeat the selectively reading and selectively processing
3 steps until the errors are corrected or repeated for a predetermined number of times,
4 whichever is less.

1 19. The system according to claim 15, wherein the recordable optical
2 storage medium is a disc that spins as the segment is selectively read and the back
3 end processor is programmed to decrease the speed of the disc prior to the segment
4 being selectively read.

1 20. The system according to claim 19, wherein the back end processor is
2 further programmed to maintain the speed of the disc substantially constant as the
3 segment is selectively read.

1 21. The system according to claim 17, wherein the front end processor is
2 further programmed to skip over at least a portion of the segment.

 22. The system for detecting defects in a recordable storage medium
comprising:

 a pickup assembly for writing a segment of test data onto at least a portion of
the recordable storage medium;

 a front end processor programmed to selectively examine the segment of test
data to determine whether the recordable storage medium contains a defect; and

 a back end processor programmed to take corrective measures if a defect is
detected, wherein the corrective measures are one or more of the corrective
measures selected from the group comprising:

 generating a defect message;

 storing the address of the portion of the recordable storage medium in
a table; or

 instructing the pickup assembly to write the segment of multimedia
data onto a new portion of the recordable storage medium.